



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
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D5159-1

Job Sheet 191631



Part No: D5159-1

Job Qty: 10 pcs

Part Name: Rib



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/5/19

Job Tracking No:

Due Date: 3/18/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV A IPP REV:A 14.10.03 NEW ISSUE DD VERF:JLM

Ship Via:

## Bill of Materials

## Job Routing

| Op No | Operation             | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|-----------------------|--------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                       |        |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 120   | Conventional Mill - 1 | 10 pcs | 3/18/19    | 3/18/19  | 0.00      | 13.70   | Conventional Mill - 1 |           |             |
|       |                       |        |            |          |           |         | Conventional Mill - 2 |           | mm 19/05/07 |
| 130   | QC 2                  | 10 pcs | 3/18/19    | 3/18/19  | 0.00      | 0.00    | QC 2 - 1              |           |             |
|       |                       |        |            |          |           |         | QC 2 - 12             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 14             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 17             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 19             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 2              |           |             |
|       |                       |        |            |          |           |         | QC 2 - 20             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 22             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 23             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 25             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 32             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 33             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 35             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 39             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 4              |           |             |
|       |                       |        |            |          |           |         | QC 2 - 40             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 44             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 45             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 48             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 49             |           | mm 19/05/07 |
|       |                       |        |            |          |           |         | QC 2 - 50             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 51             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 52             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 54             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 56             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 57             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 62             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 63             |           |             |
|       |                       |        |            |          |           |         | QC 2 - 8              |           |             |



Container No: S178459



Part: D5159-1

Job No: 191631

Serial No/Batch: S178459

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 05/07/19

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|                                            |           |         |           |                       |                 |
|--------------------------------------------|-----------|---------|-----------|-----------------------|-----------------|
| 140 QC 8                                   | 10<br>pcs | 3/18/19 | 0.00 0.00 | QC 2 - 66             |                 |
|                                            |           |         |           | QC 2 - 64             |                 |
|                                            |           |         |           | QC 8 - 12             |                 |
|                                            |           |         |           | QC 8 - 14             |                 |
|                                            |           |         |           | QC 8 - 17             |                 |
|                                            |           |         |           | QC 8 - 20             |                 |
|                                            |           |         |           | QC 8 - 25             |                 |
|                                            |           |         |           | QC 8 - 3              |                 |
|                                            |           |         |           | QC 8 - 32             |                 |
|                                            |           |         |           | QC 8 - 33             |                 |
|                                            |           |         |           | QC 8 - 35             |                 |
|                                            |           |         |           | QC 8 - 39             |                 |
|                                            |           |         |           | QC 8 - 4              |                 |
|                                            |           |         |           | QC 8 - 44             |                 |
|                                            |           |         |           | QC 8 - 45             | DAS 52 19/05/07 |
|                                            |           |         |           | QC 8 - 49             | 9-89            |
|                                            |           |         |           | QC 8 - 58             |                 |
|                                            |           |         |           | QC 8 - 8              |                 |
|                                            |           |         |           | QC 8 - 9              |                 |
|                                            |           |         |           | QC 8 - 68             |                 |
|                                            |           |         |           | QC 8 - 67             |                 |
|                                            |           |         |           | QC 8 - 1 (A)          |                 |
|                                            |           |         |           | QC 8 - 47             |                 |
|                                            |           |         |           | QC 8 - 40             |                 |
| 150 Powdercoat - 3 Grey Sand - B4B 1138839 | 10<br>pcs | 3/18/19 | 0.00 0.20 | Powdercoat - 1 - B4B  |                 |
|                                            |           |         |           | Powdercoat - 2 - B4B  |                 |
|                                            |           |         |           | Powdercoat - 3 - B4B  |                 |
|                                            |           |         |           | Powdercoat - 4 - B4B  |                 |
|                                            |           |         |           |                       |                 |
| 160 QC 3                                   | 10<br>pcs | 3/18/19 | 0.00 0.00 | QC 3 - 10             |                 |
|                                            |           |         |           | QC 3 - 13             |                 |
|                                            |           |         |           | QC 3 - 15             |                 |
|                                            |           |         |           | QC 3 - 17             |                 |
|                                            |           |         |           | QC 3 - 18             |                 |
|                                            |           |         |           | QC 3 - 2              |                 |
|                                            |           |         |           | QC 3 - 26             |                 |
|                                            |           |         |           | QC 3 - 28             |                 |
|                                            |           |         |           | QC 3 - 3              |                 |
|                                            |           |         |           | QC 3 - 30             |                 |
|                                            |           |         |           | QC 3 - 34             |                 |
|                                            |           |         |           | QC 3 - 36             |                 |
|                                            |           |         |           | QC 3 - 41             |                 |
|                                            |           |         |           | QC 3 - 51             |                 |
|                                            |           |         |           | QC 3 - 58             |                 |
|                                            |           |         |           | QC 3 - 59             |                 |
|                                            |           |         |           | QC 3 - 6              |                 |
|                                            |           |         |           | QC 3 - 68             |                 |
|                                            |           |         |           | QC 3 - 9              |                 |
|                                            |           |         |           | QC 3 - 40             |                 |
| 170 Packaging 3-1 - Stock - B4B            | 10<br>pcs | 3/18/19 | 0.00 0.00 | Packaging 3 - 1 - B4B |                 |
|                                            |           |         |           | Packaging 3 - 2 - B4B |                 |
|                                            |           |         |           | Packaging 3 - 3 - B4B |                 |
|                                            |           |         |           | Packaging 3 - 4 - B4B |                 |
|                                            |           |         |           | Packaging 3 - 5 - B4B |                 |
|                                            |           |         |           | Packaging 3 - 6 - B4B |                 |

|                |        |         |           |                        |                    |
|----------------|--------|---------|-----------|------------------------|--------------------|
|                |        |         |           | Packaging 3 - 7 - B4B  |                    |
|                |        |         |           | Packaging 3 - 8 - B4B  |                    |
|                |        |         |           | Packaging 3 - 9 - B4B  |                    |
|                |        |         |           | Packaging 3 - 10 - B4B |                    |
|                |        |         |           | Packaging 3 - 11 - B4B |                    |
|                |        |         |           | Packaging 3 - 12 - B4B |                    |
|                |        |         |           | Packaging 3 - 13 - B4B |                    |
|                |        |         |           | Packaging 3 - 14 - B4B |                    |
|                |        |         |           | Packaging 3 - 15 - B4B |                    |
|                |        |         |           | Packaging 3 - 16 - B4B |                    |
|                |        |         |           | Packaging 3 - 17 - B4B |                    |
|                |        |         |           | Packaging 3 - 18 - B4B |                    |
|                |        |         |           | Packaging 3 - 19 - B4B |                    |
|                |        |         |           | Packaging 3 - 20 - B4B |                    |
|                |        |         |           | Packaging 3 - 21 - B4B |                    |
|                |        |         |           | Packaging 3 - 22 - B4B |                    |
|                |        |         |           | Packaging 3 - 23 - B4B |                    |
|                |        |         |           | Packaging 3 - 24 - B4B |                    |
|                |        |         |           | Packaging 3 - 25 - B4B |                    |
|                |        |         |           | Packaging 3 - 26 - B4B |                    |
|                |        |         |           | Packaging 3 - 27 - B4B | SA MAY 08 2019     |
|                |        |         |           | Packaging 3 - 28 - B4B |                    |
|                |        |         |           | Packaging 3 - 29 - B4B |                    |
|                |        |         |           | Packaging 3 - 30 - B4B |                    |
|                |        |         |           | Packaging 3 - 31 - B4B |                    |
|                |        |         |           | Packaging 3 - 32 - B4B |                    |
|                |        |         |           | Packaging 3 - 33 - B4B |                    |
|                |        |         |           | Packaging 3 - 34 - B4B |                    |
|                |        |         |           | Packaging 3 - 35 - B4B |                    |
|                |        |         |           | Packaging 3 - 36 - B4B |                    |
| 180 QC 21 - SA | 10 pcs | 3/18/19 | 0.00 0.00 | QC 21 - SA - 21        | DAS 21 MAY 08 2019 |
|                |        |         |           | QC 21 - SA - 70        |                    |
|                |        |         |           | QC 21 - SA - 53        | 8-85               |

Part Op 120 - (Manufacture as per dwg) DRILL HOLES AND MILL ENDS AS PER DWG \*\*\*ENSURE MATERIAL SEAM IS AT  
 Descriptions: THE BOTTOM OF THE PART WHERE THERE IS NO HOLES\*\*\*



- 130 - (QC2- Inspect parts off machine FAI/FAIB)  
 140 - (QC8- Inspect parts - second check)  
 150 - (Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3) START TIME: \_\_\_\_\_  
 160 - (QC3- Inspect Part Finish)  
 170 - (Identify as per dwg & Stock Location: \_\_\_\_\_)  
 180 - (QC21- Final Inspection - Work Order Release)

**Job BOM**

| Part / Item      | Component Name            | Quantity              | Operation                 | Container          |
|------------------|---------------------------|-----------------------|---------------------------|--------------------|
| M304TS0.750W.049 | 304 Sq Tube .75X.75X.049W | 12.2700 ft (1.227 ea) | 120-Conventional Mill - 1 | 5149768<br>5155735 |

**Job Allocations**

| Operation                 | Component Part   | Required | Inventory | Allocated |
|---------------------------|------------------|----------|-----------|-----------|
| 120-Conventional Mill - 1 | M304TS0.750W.049 | 12       | 580       | 0         |

**Part Specifications**

| Spec No | Description | Target/Tolerance               | Limits           | Type   | Special Comments |
|---------|-------------|--------------------------------|------------------|--------|------------------|
| 1       | Rib         | 14.700Inches ± 0.030           | 14.730<br>14.670 |        |                  |
| 2       | Rib         | 12.790Inches ± 0.030           | 12.820<br>12.760 |        |                  |
| 3       | Rib         | 0.950Inches ± 0.010            | 0.960<br>0.940   |        |                  |
| 4       | Rib         | 0.266Inches ± 0.010            | 0.276<br>0.256   |        |                  |
| 5       | Rib         | 0.297Inches ± 0.010            | 0.307<br>0.287   |        |                  |
| 6       | Rib         | 0.400Inches ± 0.030            | 0.430<br>0.370   |        |                  |
| 7       | Rib         | 1.000Inches ± 0.010            | 1.010<br>0.990   |        |                  |
| 8       | Rib         | 3.000Inches ± 0.010            | 3.010<br>2.990   |        |                  |
| 9       | Rib         | 2.000Inches ± 0.010            | 2.010<br>1.990   |        |                  |
| 10      | Rib         | 2.000Inches ± 0.010            | 2.010<br>1.990   |        |                  |
| 11      | Rib         | 3.000Inches ± 0.010            | 3.010<br>2.990   |        |                  |
| 12      | Rib         | 1.000Inches ± 0.010            | 1.010<br>0.990   |        |                  |
| 13      | Rib         | 0.129Inches + 0.005<br>- 0.001 | 0.134<br>0.128   |        |                  |
| 14      | Rib         | 2.440Inches ± 0.030            | 2.470<br>2.410   |        |                  |
| 15      | Rib         | 2.625Inches ± 0.010            | 2.635<br>2.615   |        |                  |
| 16      | Rib         | 0.129Inches + 0.005<br>- 0.001 | 0.134<br>0.128   |        |                  |
| 17      | Rib         | 0.350Inches ± 0.030            | 0.380<br>0.320   | Radius |                  |

Plex 3/5/19 1:06 PM Dart.lajeunesse.marie

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                        | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b>                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   | Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Large Fab <input type="checkbox"/>                                                                                                                                                                                 | Cross tube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/>                                                                                                                                                                                                              | Eng. (Non-AW) <input type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                   | Engineering <input type="checkbox"/><br>Water Jet <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Quality <input type="checkbox"/>                                                                                              |
| Date :                                                                                                                                                                                                                                                                                                                                                                                  | Sequence #:                                                                                                                       | QTY Affected :                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        | MRB (QS1042)                                                                                                                                                                                                                                     |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        | Completed By                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        | Lead hand / Supervisor                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        | QC / QA Coordinator                                                                                                                                                                                                                              |
| <b>Root Cause</b><br><br>Operator <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Preservation <input type="checkbox"/><br>Material <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Human Factors <input type="checkbox"/> |                                                                                                                                   | <b>FAULT CATEGORY</b>                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Bending<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Mislabeled | <input type="checkbox"/> Contamination<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Incomplete/Unclear Instructions<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Power Loss/Surge<br><input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain Direction<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Off-set/Set-up | <input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Outside Tolerance<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Misread |
|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   | Other/Details:                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |